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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,836	10/22/2003	Yasuhiko Yamagishi	040302-0351	4244

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EXAMINER

SWENSON, BRIAN L

ART UNIT	PAPER NUMBER
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3618

DATE MAILED: 05/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/689,836	YAMAGISHI ET AL.	
	Examiner	Art Unit	
	Brian Swenson	3618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-22 is/are pending in the application.
- 4a) Of the above claim(s) 10-13 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 and 3-13 is/are allowed.
- 6) ☒ Claim(s) 14 is/are rejected.
- 7) ☒ Claim(s) 15-22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>7/12/05; 10/22/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Acknowledgment is made of the amendment filed on where:
 - a. Claims 1 and 3 have been amended;
 - b. Claim 2 cancelled;
 - c. Claims 15-22 added.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,707,180 issued to Hattori et al. in view of U.S. Patent No. 6,329,731 issued to Arbanas et al.

Hattori et al. teaches in Figures 1-28 and respective portions of the specification of a cooling system for an electric motor (Figure 28) of a vehicle, comprising: an electric motor (1) which drives the vehicle;

a motor case (see Figure 1 casing consists of elements 5 and 6) housing the electric motor;

an in-shaft refrigerant passage (10) provided in a shaft of the electric motor;

wherein an inside of the motor case is separated from the in-shaft refrigerant passage (10), and a refrigerant (oil is disclosed; see at least Col. 3, lines 55-56) which has passed through the in-shaft refrigerant passage does not enter the motor case.

Hattori et al. does not show a reduction unit for the vehicle.

Reduction gear units are well-known in the vehicle art for connecting to electric motors to increase the amount of torque applied to drive wheels, due to electric motors high RPM and low torque. Arbanas et al. teaches in Figures 1-4 and respective portions of the specification of: a combination of electric motor (1) with a planetary gearset (3) for use in a vehicle (abstract). It would have been obvious to one having ordinary skill in the art at the time of invention to use the reduction unit, as taught by Arbanas et al., in the invention taught by Hattori et al. One would be motivated to use a planetary gear set to provide the advantage an increase of drive torque, thereby improving vehicle acceleration and handling.

3. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,728,840 issued to Newhouse in view of U.S. Patent No. 6,329,731 issued to Arbanas et al.

Hattori et al. teaches in Figures 1-3 and respective portions of the specification of a cooling system for an electric motor (Figure 1), comprising: an electric motor (20);

a motor case (14) housing the electric motor;

an in-shaft refrigerant passage provided in a shaft (refrigerant passage is provided within shaft 44) of the electric motor;

wherein an inside of the motor case is separated from the in-shaft refrigerant passage, and a refrigerant which has passed through the in-shaft refrigerant passage does not enter the motor case; (the refrigerant is confined within in-shaft passage (44) and does not enter the motor case).

Newhouse does not state if the drive unit serves as a reduction unit or if the motor is positioned on a vehicle.

Reduction gear units are well-known in the vehicle art for connecting to electric motors to increase the amount of torque applied to drive wheels, due to electric motors high RPM and low torque. Arbanas et al. teaches in Figures 1-4 and respective portions of the specification of: a combination of electric motor (1) with a planetary gearset (3) for use in a vehicle (abstract). It would have been obvious to one having ordinary skill in the art at the time of invention to use the reduction unit and to use the teachings of using a reduction unit on a motor vehicle, as taught by Arbanas et al., in the invention taught by Newhouse. One would be motivated to use a planetary gear set to provide the advantage an increase of torque on a vehicle, thereby improving vehicle acceleration and handling.

Allowable Subject Matter

4. Claims 1, 3-13 allowed.
5. Claims 15-22 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
6. The primary reason for the indication of allowable subject matter in this case is the inclusion of an outside refrigerant passage which allows the coolant to be circulated from the in-shaft refrigerant passage to a rotation detector chamber which houses a rotation detector, which is then circulated back into the system; where the an inside of the motor case is separated from the in-shaft refrigerant passage, and a refrigerant

which has passed through the in-shaft refrigerant passage does not enter the motor case, in combination with the other elements recited not found in the prior art of record.

Conclusion

Applicant's arguments with respect to claim 14 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Swenson whose telephone number is (571) 272-6699. The examiner can normally be reached on M-F 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Ellis can be reached on (571) 272-6914. The fax phone

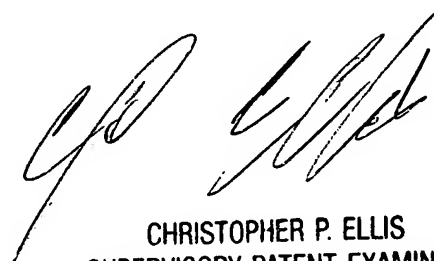
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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

 5/11-06
bls

Brian Swenson
Examiner
Art Unit 3618


CHRISTOPHER P. ELLIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600